

**CULTURAL RESOURCES INVENTORY AND ASSESSMENT:  
BORREGO SOLAR FARM,  
BORREGO SPRINGS, SAN DIEGO COUNTY, CALIFORNIA  
*MUP 09-012, MUP 09-014, LOG NO. ER 09-05-001***

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## **NATIONAL ARCHAEOLOGICAL DATA BASE INFORMATION**

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## **LIST OF ACRONYMS**

CEQA	California Environmental Quality Act
MUP	Major Use Permit
NAGPRA	Native American Graves Protection and Repatriation Act
RPO	Resource Protection Ordinance
SCIC	South Coastal Information Center
STP	Shovel Test Pit

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(Bound Separately -- Not for Public Review)

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## EXECUTIVE SUMMARY

The Borrego Solar Farm project is located in the Borrego Valley area, in northeastern San Diego County. The project parcels are located north of Palm Canyon Drive and east of Borrego Valley Road. Parcel A (APN 141-230-26, approximately 288 acres) and Parcel B (a portion of 141-230-33, approximately 53 acres – to be leased by the project proponent) are located north of the Borrego Valley Airport. A proposed transmission line corridor is located just north of the section line in Section 27, and a utility/access corridor is located along a dirt road just west of the airport. The project would result in the construction, operation and maintenance of a photovoltaic (PV) solar farm near the community of Borrego Springs. The project would consist of two separate solar generation facilities on two individual parcels of land, with additional lands affected to allow for the transport of power generated to the existing Borrego Substation. The project includes two individual parcels, the northern and southern transmission line routes and expansions to the existing substation.

Two sites, CA-SDI-2365 and CA-SDI-2366, were previously recorded within the proposed Southern Transmission Corridor. CA-SDI-2366 was also previously recorded within the substation expansion area. There were no other previously recorded sites within the proposed project area. The Native American Heritage Commission indicated that significant cultural resources are known within ½ mile of the project area and utility/access corridors.

Affinis archaeologists conducted an archaeological survey of the project area, including utility/access corridors, in May, June, and November 2009. The proposed substation expansion and the Southern Transmission Corridor, added to the project footprint subsequently, were surveyed in March 2010. Frank Salazar of the Campo Kumeyaay Nation participated in all fieldwork as the Native American monitor. Thirteen archaeological sites and eight isolates have been recorded within the project area and transmission/access corridors. Two of these sites (CA-SDI-2365 and CA-SDI-2366) were previously recorded along the Southern Transmission Corridor. CA-SDI-2366 was also recorded within the proposed substation expansion area. However, these two sites were not relocated within the project area during the current survey. The site boundary of CA-SDI-2366 has been revised into 13 discrete loci (rather than one large site), which are not located in close proximity to the Southern Transmission Corridor or substation expansion area. While a few of the sites are scatters of pottery sherds that do not appear to have a potential for subsurface deposits, several other sites are in dune topography and appear to have a subsurface component or the potential for subsurface cultural material. Eight of the sites would be classified as campsites, based on the presence of fire-affected rock (at four of these sites) and a variety of artifact types; animal bone was found at five of the sites, some burned, some unburned. Human remains were also identified at CA-SDI-2366 during a review of the collection in conjunction with NAGPRA. Only two of the 13 sites and one of the isolates do not include pottery. The County's Guidelines for Determining Significance indicate that any site that yields information or has the potential to yield information is considered a significant site. The isolates are not considered important resources and are

not significant resources under CEQA; their research potential has been fulfilled through their documentation.

Three of the archaeological sites would be subject to direct impacts from project implementation. Affinis archaeologists conducted a testing program at these sites (CA-SDI-19,412, CA-SDI-19,413, and CA-SDI-19,429) in September 2009 to assess site significance and project impacts. The testing program, which was pre-approved by County staff, consisted of mapping and collection of surface artifacts, as well as excavation of shovel test pits (STPs) at each site to determine the extent and nature of subsurface deposits, if any. The three sites tested have limited research potential and do not meet the criteria for significance under CEQA or RPO, due to the paucity of cultural material and extremely limited research potential. The impacts to the three sites have been reduced to a level of less than significant through recordation, testing, archival research, grading monitoring, and curation of artifacts.

Due to their research potential, the remaining 10 archaeological sites (CA-SDI-2365, CA-SDI-2366, CA-SDI-19,415, CA-SDI-19,423, CA-SDI-19,424, CA-SDI-19,425, CA-SDI-19,426, CA-SDI-19,427, CA-SDI-19,428, and CA-SDI-19,430) are significant resources under County guidelines, but the sites have not been assessed to evaluate their level of importance and whether they meet the significance criteria of CEQA or RPO. Per County Guidelines, the sites are assumed to be CEQA and RPO-significant resources, and direct impacts to the sites have been avoided through project design. Therefore, the project would have no direct impacts to these eight sites. The eight sites within the project parcels that are assumed to be significant in lieu of testing will be placed in dedicated open space easements to avoid direct and indirect impacts. During construction activities, temporary fencing will be placed on the perimeter of the open space areas to ensure that workers and equipment do not inadvertently encroach into the archaeological sites. Permanent signage indicating environmentally sensitive areas would be used to discourage encroachment into the open space areas during operation and maintenance of the facilities. It was determined that permanent fencing is not necessary (based on conversations with County staff archaeologists). CA-SDI-2365 and CA-SDI-2366 are recorded in the Southern Transmission Corridor. No ground disturbance is proposed in this area since crossbars would only be added to existing poles. As such there will not be any project impacts to CA-SDI-2365 if there were remnants of it under the surface (not visible during the survey). Although the overall site boundary of CA-SDI-2366 was mapped as extending into the substation expansion and the Southern Transmission Corridor, no loci of this site are recorded in proximity to either of these areas, and no cultural material was found in the substation expansion or the transmission corridor during the current survey.

Due to the dune topography within the project area, there is a potential for subsurface cultural resources that are not evident on the surface. Therefore, a monitoring program consisting of a County-approved consultant and Native American representative will be required as a condition of project approval to ensure that unknown subsurface deposits are not disturbed during any grading or other ground-disturbing activity under the MUP. The

monitoring program is detailed in Chapter 5: Management Considerations – Mitigation Measures and Design Considerations.





## **1.0 INTRODUCTION**

### **1.1 Project Description**

The Borrego Solar Farm project is located in the Borrego Valley area, in northeastern San Diego County (Figure 1). The project parcels are located north of Palm Canyon Drive and east of Borrego Valley Road. Parcels A and B are located north of the Borrego Valley Airport (Figures 2 and 3). A proposed overhead transmission line is located in the existing 20-ft wide easement in the southernmost 20 ft of Section 27, and a utility/access corridor is located along a dirt road just west of the airport (Figures 2 and 3). An alternative transmission line would follow the existing dirt road south from the project parcels to Palm Canyon Drive, west on Palm Canyon Drive to Borrego Valley Road, then north on Borrego Valley Road (Figures 2 and 3). The project also includes expansion of the existing substation from the current 2.5 acres to 3.3 acres. The project is within Township 10 South, Range 6 East, Sections 27, 34, and 35 on the USGS 7.5' Clark Lake quadrangle (Figure 2).

The proposed project would result in the construction, operation and maintenance of a photovoltaic (PV) solar farm within the community of Borrego Springs. Eurus Energy America Corporation's wholly owned subsidiary, EE Borrego Land, LLC, proposes to develop such facilities to allow for the long-term generation of clean energy from solar power that would ultimately be sold and distributed for public consumption.

The project would consist of two separate solar generation facilities on two individual parcels of land, with additional lands affected to allow for the transport of power generated to the existing Borrego Substation. The County Assessor Parcel Numbers (APNs) affected by the proposed project for the main facilities include 141-230-26 (Parcel A, approximately 288 acres) and a portion of 141-230-33 (Parcel B, approximately 53 acres – to be leased by the project proponent). Access to the 288-acre parcel and the 53-acre lease parcel would be provided from Palm Canyon Drive via an existing 12- to 16-ft wide decomposed granite (d.g.) access road. The project plan is illustrated in Figure 3.

The facilities would consist of an array of fixed-tilt, non-tracking solar PV panels, inverter/switching gear housed in 38 12-ft by 26.5-ft structures, one 20-ft by 30-ft storage shed, two onsite substations, and supporting transmission facilities. Energy generated would be transferred to the existing Borrego Substation, located approximately one mile to the west of the 288-acre parcel, adjacent to Borrego Valley Road, via a series of overhead transmission lines. The transmission lines would extend from the 288-acre parcel to the Borrego Substation along one of two identified routes: 1) west from the northwesterly corner of the parcel within an existing 20-ft easement maintained by San Diego Gas and Electric (SDG&E) (overhead facilities) (Northern Transmission Corridor), or 2) south from the southwesterly corner of the parcel along an existing roadway to Palm Canyon Drive (underground), west along Palm Canyon Drive (overhead), then north along Borrego Valley Road (overhead) (Southern Transmission Corridor).

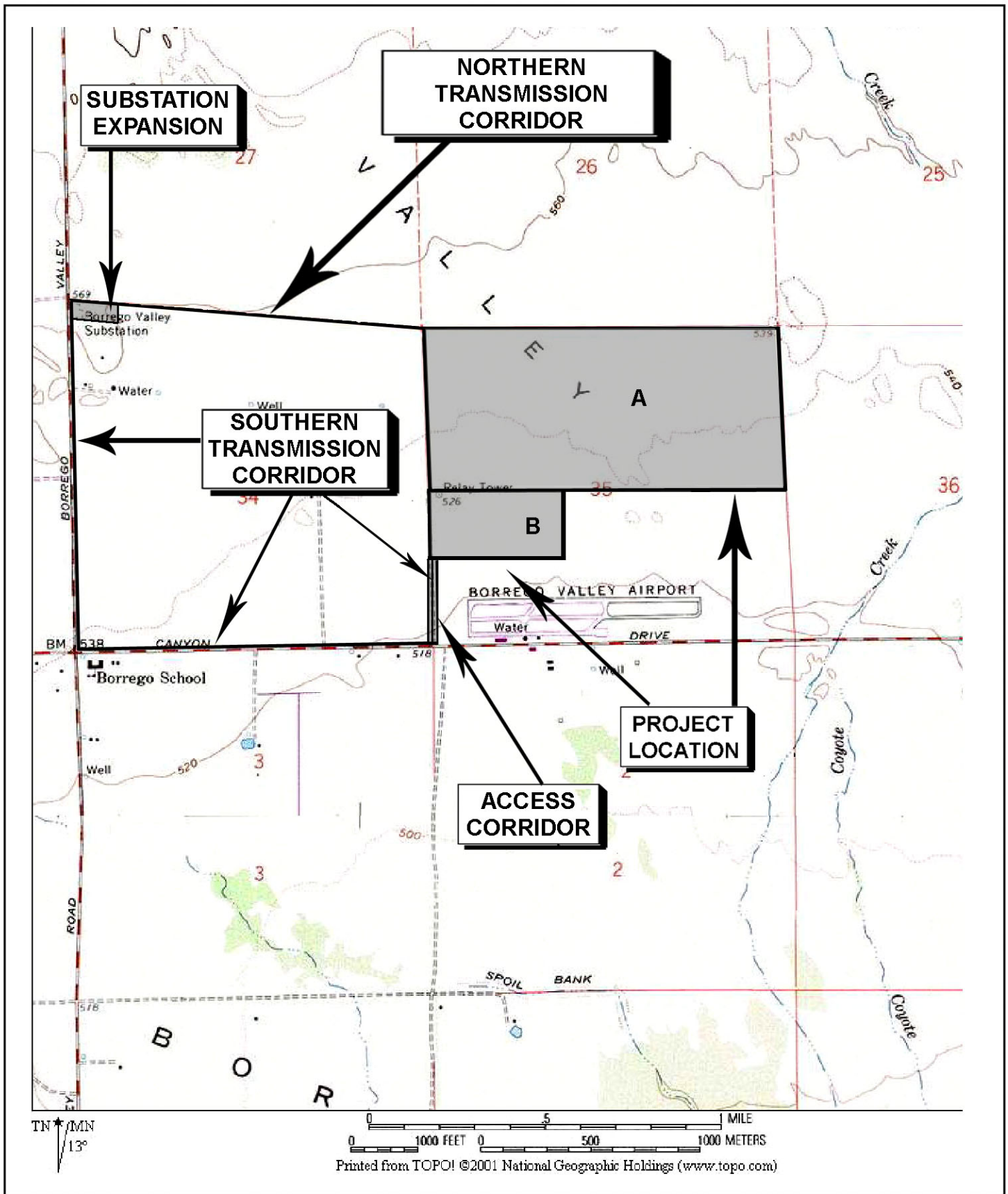


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Regional location in San Diego County

Figure 1



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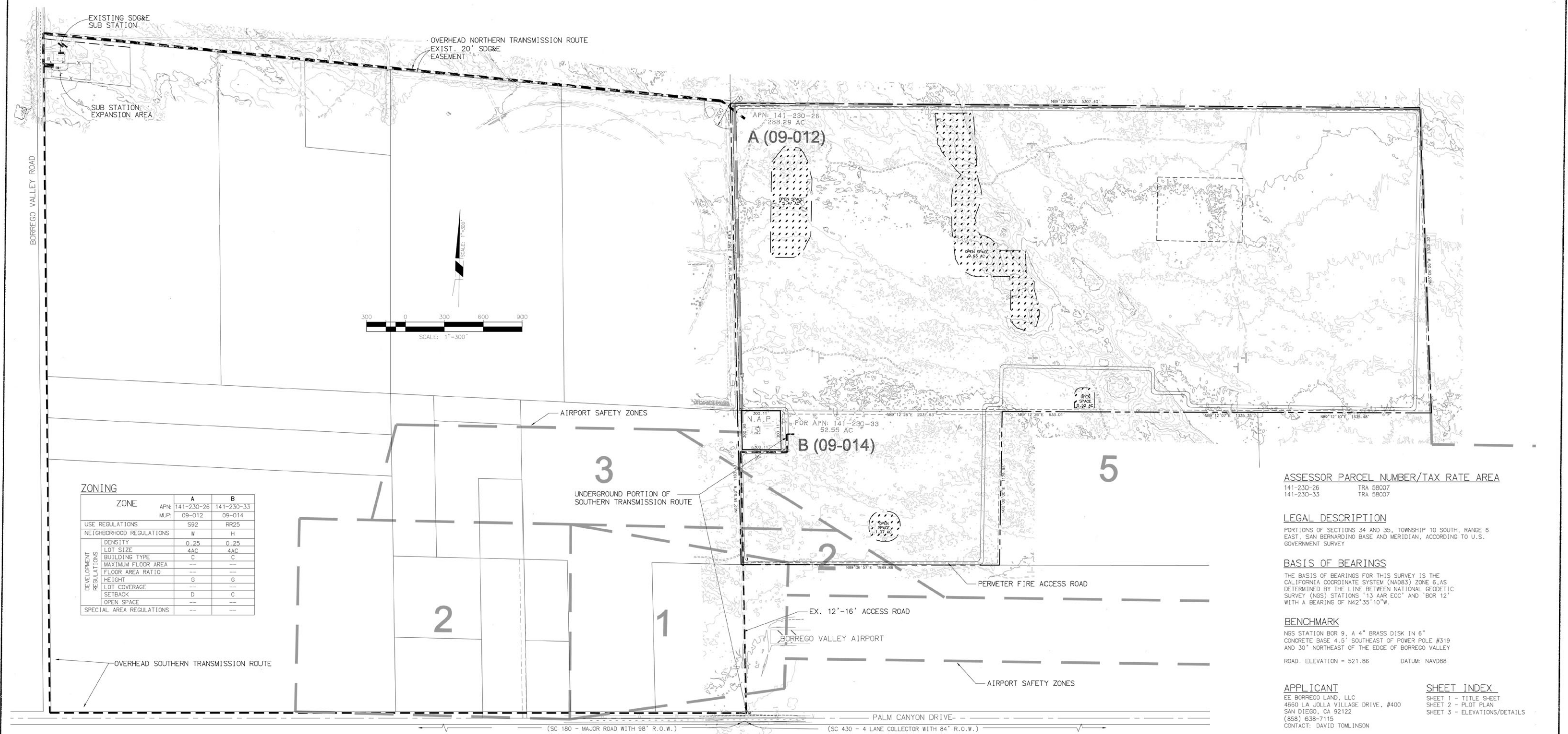
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Project Location on USGS 7.5'  
Clark Lake Quadrangle

Figure 2



MAJOR USE PERMIT PLOT PLAN



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Project Plans

Figure 3

Project-related improvements at the existing Borrego Substation would occur in the area immediately to the south of the existing fenced facilities. Project-related improvements at the Borrego Substation would affect an area approximately 100 ft by 200 ft in size, or 0.5 acre, and would include installation of a new 69 kV termination rack (bus bar), associated conductors and insulators, two breakers, two disconnect switches, and associated protection and control equipment. A “breakaway” perimeter fence 8 ft in height topped with 1 ft of barbed wire (similar to existing fencing around the Borrego Substation facilities) would be installed for security purposes. The proposed substation expansion is shown in Figure 4.

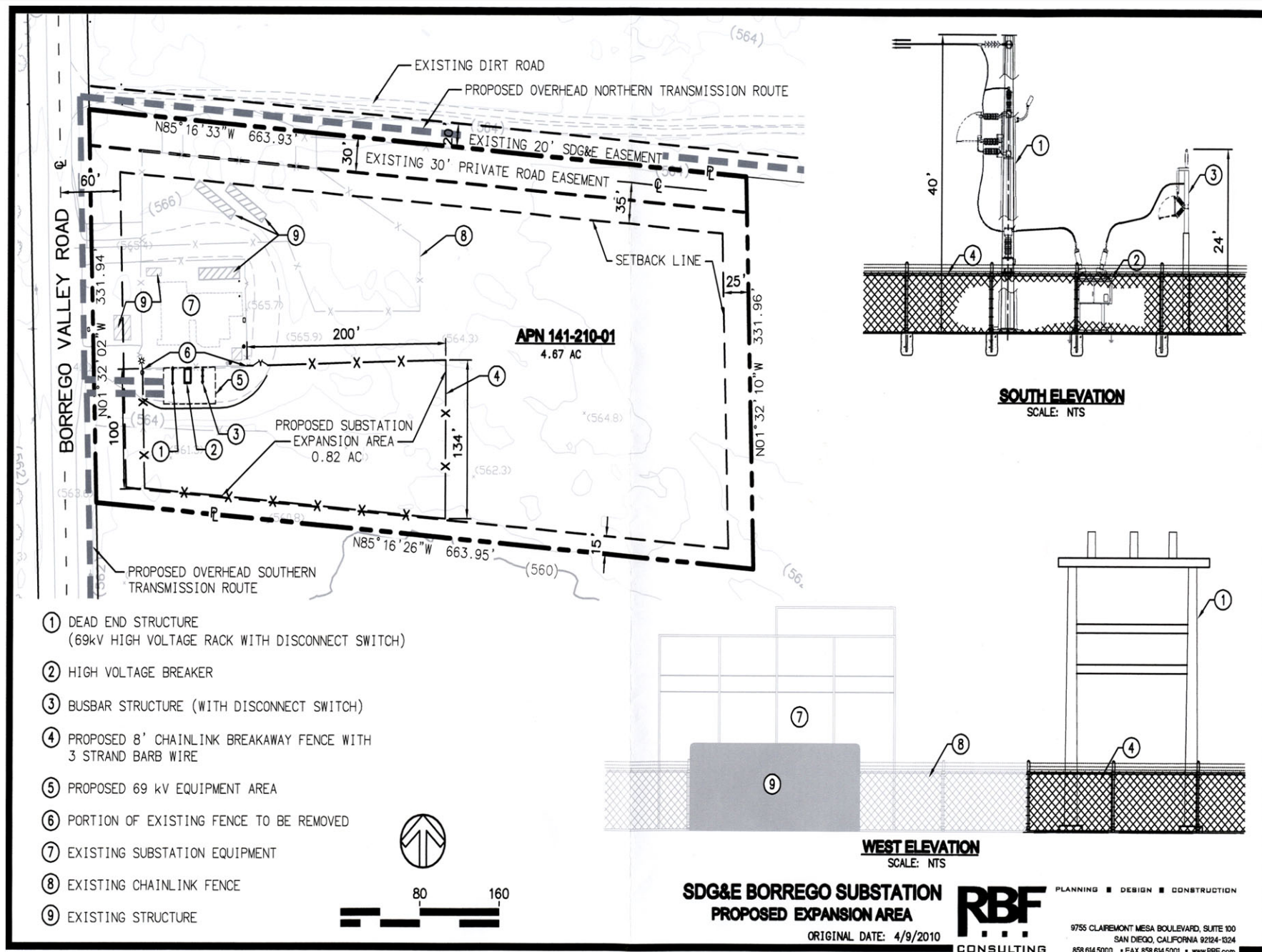
. It is anticipated that project construction would begin in the fall of 2010, with all phases of construction completed in 2011.

The survey included the Northern Transmission Corridor, which would run from the northwestern corner of Parcel A west to the existing substation along Borrego Valley Road, and the Southern Transmission Corridor, which would run along a dirt road immediately west of the Borrego Airport runway. The dirt road runs north from Palm Canyon Drive for a distance of about 1200 feet until it meets the southwest corner of Parcel B. The right-of-way for the Northern Transmission Corridor would consist of a 20-ft wide strip along the southern boundary of Section Line 27, as well as a 200-ft arc south of the section line from the northwestern corner of Parcel A. The survey for the Southern Transmission Corridor included 60 ft east of the centerline of the dirt road and 40 ft to the west. Access to this segment is controlled by the San Diego County Department of Public Works, Airport Division. The Southern Transmission Corridor runs west along the north side of Palm Canyon Drive, within the existing right-of-way. In this area, existing poles would be removed, and new poles would be placed in the same locations. The Southern Transmission Corridor turns north on Borrego Valley Road, within the existing right-of-way on the east side of the road, to the substation expansion area. On this segment there would be no ground disturbance; crossbars would be added to existing poles.

The existing Borrego Valley Substation located on the east side of Borrego Valley Road would be expanded from its current 2.5 acres to a total of 3.3 acres.

All staging for project construction would be done on-site.





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Proposed Substation Expansion

Figure 4

## **1.2 Existing Conditions**

### **1.2.1 Environmental Setting**

#### **Natural Environment**

The project area is in the Borrego Valley, which is in the desert region of northeastern San Diego County. The Anza-Borrego Desert area is part of the larger Colorado Desert. Borrego Sink is approximately 4 miles southeast of the project area, and the Borrego Badlands are approximately 5 miles to the east. The average January low temperature for the area is 38° F, and the average July or August high temperature is 106° (Griner and Pryde 1976:Table 3.1). Average annual rainfall for the nearby Borrego Sink is 6.3 in (Caltrans-Sonoma State University 2009). The project area, and the Borrego Valley in general, is underlain by Quaternary alluvium (Rogers 1965). The vast majority of the study area is mapped as Indio silt loam, 0 to 2 percent slopes; and Indio silt loam, saline, 0 to 2 percent slopes; with pockets of Rositas fine sand, 0 to 2 percent slopes; and Rositas fine sand, hummocky, 5 to 9 percent slopes. The latter soil type has “hummocks to low dunes that are less than 6 feet high” (Bowman 1973:74).

The soil types found on the property generally support bur-sage, mesquite, creosote, ocotillo, cholla, saltbush, and annual grasses and forbs (Bowman 1973). These plants were used by the Native population of the area. The project area itself currently supports two habitat types: Desert Saltbush Scrub and Stabilized and Partially Stabilized Desert Dunes (Adams and Busdosh 2009), the notable plant resource being saltbush. Creosote and mesquite were also noted. Warren noted that the Cahuilla often located villages near thick stands of mesquite, where the water table was high enough to reach by digging wells (Warren 1984). The same idea probably held true in the Borrego Valley; stands of mesquite indicated a high water table, which would have made an attractive area to locate temporary camps.

The overall topography is generally descending very gradually from northwest to southeast across the region (Figure 2). Although the topography of the project area is generally flat, there are a series of low dune ridges and there are hummocky areas throughout. No channels or indications of linear flow were found, even in the lowest areas between the ridge-like dunes. Ephemeral drainages were noted adjacent to the southern access corridor (Adams and Busdosh 2009), but no reliable sources of water are found in the vicinity. Coyote Creek is located to the east of the project area (Figure 2).

#### **Cultural Environment**

Mc Donald (1992) summarized the archaeology of Anza-Borrego Desert State Park and its vicinity, including the area of Borrego Springs and the current project area. McDonald



separated the prehistory of the Anza-Borrego area into two periods: the Early Archaic period and the Late Prehistoric period.

Some researchers have suggested very early occupations for southern California in general (Carter 1957, 1978, 1980; Minshall 1976), and for the Colorado Desert in particular. McDonald (1992) discussed the case of mammoth remains recovered from the Borrego Badlands that are alleged to have butchering marks and to date to 300,000 years ago or more (Miller et al. 1991). However, there is not general agreement on the human origin of the marks.

Other sites that have been suggested to be early include the Truckhaven and Yuha burials (Bada and Finkel 1983; Childers 1974; Carter 1980). Despite claims for antiquity based on questionable radiocarbon dates, relatively recent dates on bone from the two burials indicate that the Truckhaven burial dates to 1650-3850 radiocarbon years before present (BP) and that the Yuha burial dates to less than 500 radiocarbon years BP (Taylor et al. 1985).

The sites most commonly associated with the Early Archaic period are primarily cleared circles in the desert pavement, often called sleeping circles (McDonald 1992). Because of their association with now-dry watercourses and their lack of association with current sources of water, these sites have been suggested to have some antiquity. Rogers (1939, 1966) noted that occurrence of artifacts at such sites that are attributed to the San Dieguito complex, a complex dated to as early as 8500 B.C. in the Panamint Valley and to nearly 7000 B.C. on the Pacific coast near San Diego (Davis 1966). Others have suggested older dates for these features and the associated artifacts (Begole 1973, 1981).

McDonald (1992) questioned any dating of these features. She argued that the limited cultural remains, the lack of detailed analysis since Rogers' work, and the lack of excavation of these features preclude any accurate dating estimate. She concluded that they do predate the appearance of small projectile points and ceramics, both hallmarks of the Late Prehistoric period, however.

Based on assessment of radiocarbon dates from the area, particularly those from Indian Hill Rockshelter, McDonald (1992) concluded that the desert supported "sparse populations" by 4000 to 5000 years ago. In addition to the Indian Hill Rockshelter data, McDonald cited Hubbs' dates on charcoal from a hearth in an alluvial deposit along San Felipe Creek. The material was dated to 4980±100 BP (Ferguson and Libby 1962). A projectile point that was apparently of the Elko series, based on William Wallace's recollections, was found in association with the dated charcoal (McDonald 1992).

The transition from the Early Archaic to the Late Prehistoric period should be marked by the occurrence of projectile point forms such as Rose Springs points, but such points are generally lacking in the Colorado Desert. This may represent a hiatus in occupation, but McDonald (1992) suggested that it may also be simply a result of an early adoption of wooden tipped arrows, a trait that was seen in many Yuman groups ethnographically.

The Late Prehistoric occupations of the area were by people who made ceramics and small projectile points. Rogers (1945) suggested a date of A.D. 900 for the beginning of this period, which ends in historic times. McDonald (1992) agreed with Wallace's (1955) suggestion that the period actually starts about A.D. 1000.

In 1774 Don Juan Bautista de Anza led an expedition that passed through the Borrego Springs area. At the present site of Borrego Springs, which Anza named San Gregorio, the expedition encountered 60 Indians who were hunting (Bolton 1930). It appears that both Kumeyaay and Cahuilla occupied this area, based on the accounts of the expedition (Bolton 1930). The area appears to have been a border area between Kumeyaay and Cahuilla.

Kumeyaay territory included a vast area of varied terrain, from the coast and inland valleys to the mountains and down into the desert. The Kumeyaay were mainly a hunting and gathering people, whose seasonal round took them to various areas to take advantage of seasonal resources. "However, they had also developed horticultural/agricultural techniques including burning, seed broadcasting, transplanting, and planting (Bean and Lawton 1973; Gee 1972; Luomala 1978; Shipek 1982)" (Mealey and Shabel 2002).

Delfina Cuero, a Kumeyaay who grew up in San Diego County in the early 1900s says "in April and May we used to hunt over toward the desert for mescal [agave]" (Shipek 1970:32). Aside from the food staples of mesquite (*Prosopis* spp.) and agave (*Agave* spp.), other important floral resources used by the Kumeyaay that are found in the desert include: saltbush (*Atriplex* spp.); Mormon tea (*Ephedra* spp.); buckwheat (*Eriogonum fasciculatum*); barrel cactus (*Ferocactus cylindraceus*); juniper (*Juniperus californica*); fishhook cactus (*Mammillaria* spp.); cholla, prickly pear, and beavertail cactus (*Opuntia* spp.); chia (*Salvia columbriæ*); jojoba (*Simmondsia chinensis*); yucca (*Yucca* spp.); and various grasses. These, and other locally available plants were used for food, medicine, ceremony, and/or manufacturing items (Bean and Saubel 1987; Hedges and Beresford 1986; Shipek 1970) [Mealey and Shabel 2002:8].

The Kumeyaay cremated their dead. The body and its possessions were burned on a pyre over a pit (Luomala 1978:603). After the cremation of the body, the ash, bones, and unburned fragments of possessions were gathered up and placed in a pottery jar that was then capped and buried or hidden among remote rocks (Kroeber 1976:716; Luomala 1978:603) [Mealey and Shabel 2002:9].

The Cahuilla people who made use of the northern Anza-Borrego area used resources in similar ways to the Kumeyaay. They also practiced cremation of the dead.

### 1.2.2 Records Search Results

Records searches for the project area and a one-mile radius were obtained from the South Coastal Information Center (SCIC) at San Diego State University. Fifteen sites and 11 isolates have been previously recorded within a one-mile radius of the study area. None of these resources are within or adjacent to the project parcels, but two sites (CA-SDI-2365 and CA-SDI-2366) are mapped along the Southern Transmission Corridor, and CA-SDI-2366 is also mapped within the substation expansion area. The records search maps are included as Confidential Appendix A of this report. The previously recorded resources are summarized in Table 1. As shown in Table 1 and on the records search map, two of the sites in the vicinity (CA-SDI-2366 and CA-SDI-2367) are quite large, each consisting of at least 20 individual loci. Each locus represents a single campsite, with fire-affected rock, flaked stone debitage, ground stone implements (manos and metates), and pottery. Burned bone was noted at some loci, and marine shell was noted at some. Five other sites in the vicinity also appear to be small campsites, including CA-SDI-2365. Fire-affected rock and debitage were noted at all five of these sites, four contained pottery, and bone and mano fragments were noted at some of these sites. Four previously recorded sites consisted solely of pottery sherds. Two sites contained a few ground stone fragments and a few pottery sherds. One site was recorded as a hearth with one mano. Nine of the 11 isolates were pottery sherds: four were described as Salton Brownware; one other brown ware sherd was noted, the others were described as buff ware. The other two isolates consisted of one piece of chert debitage and one bifacial mano fragment.

Four of the site records (CA-SDI-9936, CA-SDI-9937, CA-SDI-11,768, and CA-SDI-11,769) specifically note that the cultural material was found on and surrounded by dunes. Site records for three other sites (CA-SDI-2365, CA-SDI-2366, and CA-SDI-2367) note that the sites in the area have been systematically looted for decades.

**Table 1 Previously Recorded Sites Within a One-Mile Radius**

CA-SDI-#	Site Description	Site Dimensions*	Recorder, Date
2365	Thermal-fractured rock and "light quartz chippage". Systematically looted over 40 years. Mapped in the Southern Transmission Corridor.	300 ft [91 m] by 100 ft [30 m]	Seidel et al., 1973
2366	At least 20 discrete campsites, demarcated by thermal-fractured rock, average 100 ft in diameter. Projectile points, manos, metates, flaked stone artifacts, pottery, burned bone, Olivella shell, fish vertebrae. "Thoroughly potted". Survey for Sunrise Powerlink noted 13 loci, with buff ware and brown ware pottery, debitage, metate fragments, mano fragment and whole mano, one hearth. Mapped in the Southern Transmission Corridor and substation expansion area.	160 acres	Seidel et al., 1973; Gallegos Associates, 2007(?)
2367	At least 20 discrete campsites, demarcated by thermal-fractured rock, "chippage" and pottery, some with moderate burnt bone. Projectile points, manos, metates, pottery, "chippage". Thoroughly systematically looted over 40 years or more.	160 acres	Seidel et al., 1973
9936	Artifact/ecofact scatter on (and possibly within) stabilized dune. Pottery, flakes, mano, rock concentrations, possible baked hearth surface. Pot drop 100 m east.	40 m by 25 m	Apple, 1984

CA-SDI-#	Site Description	Site Dimensions*	Recorder, Date
9937	Low-density artifact/ecofact scatter on stabilized dune. Pottery, flakes, mano fragments, cores, burned bone, thermally affected rock.	35 m by 35 m	Apple, 1984
10,312	Scatter of pottery sherds (nine buff ware and three brown ware); probably sheet wash; site has been graded.	20 m by 10 m	Fink, 1974
11,768	Scattered flakes, pottery, manos, bone, and fire-cracked rock on desert pavement surrounded by dunes.	40 ft [12 m] by 60 ft [18 m]	Fink, 1974
11,769	Flakes, pottery, and fire-cracked rock on desert pavement surrounded by dunes.	10 ft [3 m] by 20 ft [6 m]	Fink, 1974
18,315	Historic and modern trash dump with four major concentrations. A subsurface deposit 6 ft deep was noted in the center of the site. Site was possibly a city dump or a dump for local farmers. Significant.	100 m by 90 m	Greene, 2007
18,622	Scatter of three pottery sherds (brown ware, thick).	10 m by 10 m	Piek, Williams, Linton, 2007
18,623	Scatter of one pottery sherd (buff ware) and two ground stone fragments.	10 m by 10 m	Piek, Williams, Linton, 2007
18,624	Scatter of three pottery sherds.	10 m by 10 m	Piek, Williams, Linton, 2007
18,625	Remnant hearth consisting of 13 fire-affected rocks; one mano.	10 m by 10 m	Piek, Williams, Linton, 2007
18,626	Scatter of three pottery sherds (brown ware, thin).	7 m by 25 m	Piek, Williams, Linton, 2007
18,627	Artifact scatter of four pottery sherds (buff ware), six fragments of ground stone from a single item, one metate fragment	40 m by 11 m	Piek, Williams, Linton, 2007
* Site dimensions from site record			

P-37-#	Description	Site Dimensions	Recorder, Date
028165	One Salton Brownware sherd	NA	Greene, 2007
028166	One Salton Brownware sherd	NA	Greene, 2007
028167	One Salton Brownware sherd	NA	Greene, 2007
028168	One Salton Brownware sherd	NA	Greene, 2007
029074	One buff ware sherd	NA	Piek, Williams, Linton, 2007
029075	One buff ware sherd	NA	Piek, Williams, Linton, 2007
029076	One brown ware sherd	NA	Piek, Williams, Linton, 2007
029077	One buff ware sherd	NA	Piek, Williams, Linton, 2007
029078	One chert debitage	NA	Piek, Williams, Linton, 2007
029079	One bifacial mano fragment	NA	Piek, Williams, Linton, 2007
029080	Two buff ware sherds	NA	Piek, Williams, Linton, 2007

A single historic site was recorded in the vicinity. CA-SDI-18,315 was recorded as a historic and modern trash dump with four major concentrations. A subsurface deposit 6 ft deep was found in the center of the site, which may have been a city dump or a dump used by local farmers. This site was determined to be a significant resource under CEQA, but not RPO-significant (site record on file at SCIC).

A map of roads and trails in use from 1769 to 1885 shows a stagecoach route in operation between 1865 and 1885 crossing the northeast corner of Section 35, that is, the northeast corner of the project area. This area is shown on a map of Anza-Borrego Desert State Park as "historic corridor". Other maps show the De Anza Trail east of the project area. It must be noted that the Anza Trail and various stagecoach routes are general routes, rather than specific roads or trails. The only trail or road shown in the vicinity by Wray (2004:Map 7) is Truckhaven Trail. "This dirt road was the first improved road from Borrego Valley toward the Salton Sea. The road was built in 1929 in by Alfred "Doc" Beatty and associates" (Wray 2004:103). The Truckhaven Trail is several miles east of the project area.

The 1928 tax factor aerial photographs do not cover the study area. The earliest topographic maps on file for the study area at SCIC are from 1959; older topographic maps were reviewed at the San Diego Historical Society. The topographic maps reviewed were the 1941 USGS 15' Clark Lake quadrangle, based on aerial photography from 1941; the 1942 U.S. Army 15' Clark Lake quadrangle, based on aerial photography from 1941; the 1960 USGS 15' Clark Lake quadrangle, based on aerial photography from 1954 and 1956, and the 1959 USGS 7.5' Clark Lake quadrangle, based on aerial photography from 1954 and 1956. The 1959 map was photorevised in 1974.

No buildings or structures are shown in proximity to the study area on the maps from the 1940s. The Borrego School and two ranches appear on these maps, but they are well outside the study area. A relay tower, which first appears on the 1959 map, is adjacent to the project area; it is still in use. A road and a building are shown adjacent to the project area on both the 1959 and 1960 topographic maps, as well as the current USGS map.

## **Previous Studies**

The SCIC has a record of 10 archaeological studies that have been conducted within a one-mile radius of the study area. Three of these studies have been conducted within the past five years; the other seven are all at least 25 years old. Of the three studies conducted within the past few years, only one included actual field surveys in relative proximity to the current study area. There is no record of surveys within the study area itself.

A survey of the Borrego Valley was conducted by avocational archaeologists and volunteers in the early 1970s and may have covered the current project area to some extent. The draft report of that survey noted that “a rigorously controlled sampling within the Valley has not been accomplished” (Seidel 1975:ii). Three of the sites in the vicinity of the project (CA-SDI-2365, CA-SDI-2366, and CA-SDI-2367) were recorded as the result of that survey. The draft report specifies that it is not for publication or citation without permission of the author, as it is a draft. However, no final copy of the report appears to be available, and it must be noted that the draft report references a number of sites using SDI-numbers that do not appear on the maps at the SCIC. During the 1970s, SCIC sometimes assigned archaeologists a block of trinomials for sites on the assumption that the site records would be completed and submitted; however, the site records were not always submitted, as appears to be the case for some of the sites recorded by Seidel (1975).

California State Parks, Colorado Desert District, has notes and maps from a surface collection and excavation program at the site identified by Seidel as CA-SDI-2663. There is no site by this number on the records search maps, but the notes indicate it is just south of the elementary school (about ½ mile southwest of the project area). This site is noted here, because during a review of the collection in conjunction with the Native American Graves Protection and Repatriation Act (NAGPRA), human bone was noted from the site, as well as from CA-SDI-2366 and from the Borrego Valley in general (no specific provenience). This does not suggest that human remains are likely to occur within the project area, but it must be noted that human remains have been identified in the vicinity.

## **Previous Recorded Sites Adjacent to the Study Area**

No archaeological sites have been previously recorded adjacent to the project parcels. However, as addressed above, CA-SDI-2366 is mapped immediately south of the existing SDG&E utility easement that runs between the project area and the existing substation (the Northern Transmission Corridor) (Confidential Appendix A). This site was recorded in 1973 as at least 20 discrete small campsites, averaging 100 ft (30 m) in diameter. These loci consisted of fire-affected rock, ground stone artifacts, flaked stone artifacts, pottery, burned bone, Olivella shell, and fish vertebrae; not all loci included all these items. The 1973 site record noted that the site had been systematically looted over several decades. During the 2007 survey for the Sunrise Powerlink project, 13 loci were noted at the site. Cultural material from CA-SDI-2366 is held by California State Parks, Colorado Desert District.

During a review of the collection in conjunction with NAGPRA, several pieces of bone from the site were identified as human cranial bone (four fragments) or probable human (three fragments).

### **1.3 Applicable Regulations**

Resource importance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined in CEQA, RPO, and the San Diego County Local Register provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

#### **1.3.1 California Environmental Quality Act (CEQA)**

According to CEQA (§15064.5a), the term "historical resource" includes the following:

- (1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).
- (2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- (3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:
  - (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
  - (B) Is associated with the lives of persons important in our past;
  - (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or



- (D) Has yielded, or may be likely to yield, information important in prehistory or history.
- (4) The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resource Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change as:

- (1) Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.
- (2) The significance of an historical resource is materially impaired when a project:
  - (A) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or
  - (B) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
  - (C) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

Section 15064.5 8 of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- (1) When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).

- (2) If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- (3) If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- (4) If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

- (D) When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code §5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:
  - (1) The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5).
  - (2) The requirement of CEQA and the Coastal Act.

### **1.3.2 San Diego County Local Register of Historical Resources (Local Register)**

The County requires that resource importance be assessed not only at the State level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the Local Register, it will be considered an important resource.

- (1) Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
- (2) Is associated with the lives of persons important to the history of San Diego County or its communities;
- (3) Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
- (4) Has yielded, or may be likely to yield, information important in prehistory or history.

### **1.3.3 San Diego County Resource Protection Ordinance (RPO)**

The County of San Diego's RPO protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

Sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance. Such locations shall include, but not be limited to:

- (1) Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
  - (aa) Formally determined eligible or listed in the National Register of Historic Places by the keeper of the National Register; or
  - (bb) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or
- (2) One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and materials, and
- (3) Any location of past or current sacred religious or ceremonial observances which is either:
  - (aa) Protected under Public Law 95-341, the American Indian Religious Freedom Act or Public Resources Code Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or
  - (bb) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with County standards.

## **2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE**

### **2.1 Prehistoric Archaeological Resources**

For the purposes of this technical report, any of the following will normally be considered a potentially significant environmental impact to cultural resources:

1. The project, as designed, causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines.
2. The project proposes activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the Resource Protection Ordinance.

The significance guidelines listed above have been selected for the following reasons:

Guideline 1 is derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating archaeological resources to determine whether or not a proposed action would have a significant effect on unique archaeological sites.

Guideline 2 was selected because the RPO requires that cultural resources be considered when assessing environmental impacts. The RPO provides preservation measures for identified cultural sites. In addition, County regulations provide protection for previously undocumented resources that may be discovered during construction. See Section 1.3 for a discussion of the specific regulations. Any project that would have an adverse impact (direct, indirect, cumulative) on significant cultural resources as defined by these guidelines would be considered a significant impact.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with County standards.

### **2.2 Human Remains**

For the purposes of this technical report, any of the following will normally be considered a potentially significant environmental impact to cultural resources:

1. The project, as designed, disturbs any human remains, including those interred outside of formal cemeteries.
2. The project proposes activities or uses damaging to, and fails to preserve, significant cultural resources as defined by the Resource Protection Ordinance.

The significance guidelines listed above have been selected for the following reasons:

Guideline 1 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the “Most Likely Descendant” as identified by the Native American Heritage Commission (NAHC) for any project in which human remains have been identified.

Guideline 2 was selected because the Resource Protection Ordinance requires that cultural resources be considered when assessing environmental impacts. The Resource Protection Ordinance provides preservation measures for identified cultural sites. In addition, County regulations provide protection for previously undocumented resources that may be discovered during construction. See Section 1.3 for a discussion of the specific regulations. Any project that would have an adverse impact (direct, indirect, cumulative) on significant cultural resources as defined by these guidelines would be considered a significant impact.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with County standards.

## **3.0 ANALYSIS OF PROJECT EFFECTS**

### **3.1 Methods**

#### **3.1.1 Survey Methods**

The main project parcels were surveyed for cultural resources by Affinis archaeologists and Native American monitor, Frank Salazar of the Campo Kumeyaay Nation, between May 21 and May 24, 2009. The southern access corridor was surveyed by Affinis field director, Andrew Giletti, and Frank Salazar on June 10, 2009. The Northern Transmission Corridor and 200-ft radius in Section 34 were surveyed by Affinis Director of Cultural Resources, Mary Robbins-Wade, and Frank Salazar on November 20, 2009. The Southern Transmission Corridor along Palm Canyon Drive and Borrego Valley Road, as well as the substation expansion area, were surveyed by Affinis archaeologists and Native American monitor, Frank Salazar on March 8, 2010. The project area was surveyed using parallel transects spaced 10-15 m apart. In general, the ground visibility was very good. Each of the archaeological resources found was mapped on a project aerial photograph and the GPS coordinates were recorded. Site records were completed for each site and isolate and were submitted to the SCIC and the San Diego Museum of Man. The only cultural material collected during the survey was isolate P-37-030926.

#### **3.1.2 Testing Methods**

Affinis archaeologists conducted a testing program at sites CA-SDI-19,412, CA-SDI-19,413, and CA-SDI-19,429 in September 2009. The testing program, which was pre-approved by County staff, consisted of mapping and collection of surface artifacts, as well as excavation of shovel test pits (STPs) at each site to determine the extent and nature of subsurface deposits, if any.

STPs measured 50 cm north-south by 30 cm east-west, oriented to true north, and were excavated in 10-cm contour levels to a minimum depth of 50 cm. Soils were passed through 1/8-in mesh rocker screens. Standard record forms were completed for each STP, recording artifact recovery, soil characteristics, and other information about the STP. Fire-affected rock was noted but not collected.

Frank Salazar of the Campo Kumeyaay Nation served as Native American monitor and was present on-site throughout the testing program.

All cultural material collected during the testing program was taken to the Affinis lab, where it was cleaned, sorted, and cataloged. Standard catalog forms were completed for the collection that recorded provenience, artifact type, and material. The artifact catalogs are included as Appendix A of this report. Cultural material collected will be curated at the San Diego Archaeological Center or other appropriate curatorial facility. Updated site records were prepared for the sites tested and were submitted to the South Coastal Information Center and San Diego Museum of Man.

### **3.1.3 Native American Participation/Consultation**

The Native American Heritage Commission was contacted for a search of their Sacred Lands Files (see Confidential Appendix B). Individuals and groups identified by the Native American Heritage Commission were contacted regarding the project. Frank Salazar III of the Campo Kumeyaay Nation participated in the survey and testing program as the Native American monitor. Carmen Lucas of the Kwaaymii Laguna Band of Mission Indians responded with concerns regarding the potential for significant cultural resources within the project area. A field visit with Ms. Lucas has not yet taken place, but her comments are included in Section 3.2.2.

## **3.2 Results**

### **3.2.1 Archaeological Resources**

Thirteen archaeological sites and eight isolates were recorded within the project area and transmission/access corridors. Two of these sites (CA-SDI-2365 and CA-SDI-2366) were previously recorded along the Southern Transmission Corridor, and CA-SDI-2366 originally was recorded within the substation expansion area; they were not relocated during the March 8, 2010 survey. The locations of these cultural resources are shown in Figure 5 (Confidential Appendix C), and the sites are summarized in Table 2. Site records are included as Confidential Appendix D. The sites are described individually below. While a few of the sites are scatters of pottery sherds that do not appear to have a potential for subsurface deposits, several other sites are in dune topography and appear to have a subsurface component or the potential for subsurface cultural material. Eight of the sites would be classified as campsites, based on the presence of fire-affected rock (at four of these sites) and a variety of artifact types; animal bone was found at five of the sites, some burned, some unburned. Human remains were also identified at site CA-SDI-2366 during a review of the collection in conjunction with NAGPRA. Only two of the 13 sites and one of the isolates do not include pottery.

As noted under Records Search Results, a historic trail is mapped as crossing the northeastern corner of the project area. No evidence of a trail or any historic debris was found in the project area. It must be noted that trails and stage routes were general routes, rather than specific roads.

#### **CA-SDI-2365**

CA-SDI-2365 was recorded in 1973 as “thermo-fractured rock” and “light quartz chippage, no artifacts, no pottery, no bone noted” covering an area 300 ft (91 m) by 100 ft (30 m). The site record noted that the site is bisected by Borrego Valley Road. The site record also included the remark that all sites in the Borrego Valley have been systematically looted “over the last 40 years or more”. No evidence of CA-SDI-2365 was found within the Southern Transmission Corridor during the current survey. The transmission corridor is adjacent to the road and has been graded and maintained for many years. The project

does not propose any ground disturbance in this area; crossbars would be added to existing poles.

#### **CA-SDI-2366**

CA-SDI-2366 was also recorded in 1973. This site was described as consisting of least 20 discrete campsites, demarcated by thermal-fractured rock, averaging 100 ft in diameter. Cultural material noted on the site record included projectile points, manos, metates, flaked stone artifacts, pottery, burned bone, Olivella shell, and fish vertebrae. The site record also noted, "Sites are elongated by previous surface plowing and are thoroughly potted". A site record update in conjunction with a survey for the SDG&E Sunrise Powerlink Project (apparently done in 2007) located "13 separate loci of artifacts and features within the original site boundary of CA-SDI-2366". Human remains were identified at this site during a review of the collection in conjunction with NAGPRA. The map with this site record update shows each locus as a separate site with no cultural material between. None of the loci mapped in conjunction with that survey are in proximity to the substation expansion or the Northern Transmission Corridor (see Figure 5). During the current survey, no cultural material was found in the substation expansion area or the Northern Transmission Corridor.

#### **CA-SDI-19,412**

During the survey, CA-SDI-19,412 was described as three buff ware sherds over a 5 m by 5 m area (based on visual estimation). The site is in the southeastern portion of Parcel B. The testing program consisted of surface

**Figure 5 includes sensitive material –  
included in Confidential Appendix C**

Figure 5 Locations of Cultural Resources



**Table 2 Summary of Archaeological Resources in Project Area**

CA-SDI- #	Description	Contents	Size (m) (visual estimate unless otherwise stated)
2365	FAR and lithic scatter. Not found within transmission corridor during current survey	"Light quartz chippage" previously recorded; no artifacts found during current survey	91 m by 30 m (from original site record)
2366	Originally recorded as 20 discrete camps. Update recorded 13 loci, none within transmission corridor or substation expansion. Not found during current survey	Flaked stone, ground stone, pottery, FAR, burned and unburned bone previously recorded; no artifacts found during current survey. Human remains were identified at the site during a review of the collection in conjunction with NAGPRA.	160 acres (from original site record)
19,412	Pottery scatter (light density)	3 buff ware sherds	7 x 2 (measured)
19,413	Pottery scatter (light density) and isolated flake	2 brown ware sherds, 1 basalt debitage, 2 obsidian debitage	10 x 10 (measured)
19,415	Pottery scatter	10 buff ware sherds, 2 brown ware sherds	35 (EW) x 30 (NS)
19,423	Pottery scatter (light density)	3 buff ware sherds	10 x 10
19,424	Pottery scatter, ground stone, flaked stone	50+ pottery sherds (including rim sherds), 3 metate fragments, 1 mano, 10+ quartz, chert, MV** flakes and angular debris	40 x 30
19,425	Pottery scatter with FAR* and burned bone	20+ FAR*, 10+ buff ware sherds, 2 fragments of burned bone	10 x 10
19,426	Sparse and scattered collection of pottery, FAR*, debitage	10+ FAR*, 5+ buff ware sherds, 1 obsidian flake, possible angular debris. This site includes BS 22, originally recorded as an isolate	60 x 60

CA-SDI- #	Description	Contents	Size (m) (visual estimate unless otherwise stated)
19,427	Pottery and lithic scatter with animal bone	25+ buff ware sherds, 1 mano fragment, 30+ flakes (chert, wonderstone, quartz, MV**), 1 chert early stage preform tip, 2 burned large mammal bones	60 (NS) x 30 (EW)
19,428	Large lithic scatter with unburned bone	30+ flakes and angular debris (chert, MV**, quartzite), 1 jasper microflake, 6 mano fragments, 4 unburned large mammal bone. No pottery	220 x 60
19,429	Pottery scatter, ground stone, flaked stone, animal bone, FAR*	22 brown ware sherds, 15 buff ware sherds, 1 hammerstone, 1 quartz angular debris, 2 metate fragments, 1 mano fragment, 7 pieces of animal bone, concentrations of FAR*	22 X 15 (measured)
19,430	Hearth and dense artifact concentration: pottery, lithics, unburned bone	200+ buff ware sherds (including rim sherds), 100+ chert angular debris, 3+ quartz angular debris, 1 quartz core, 2 metate fragments, 2 mano fragments, 1 ground stone fragment, a large amount of unburned large mammal bone, hearth	70 (NS) x 40 (EW)
P-37-#	Description	Contents	Size (m) (visual estimate)
030542	Isolate	1 brown ware sherd	--
030544	Isolate	1 buff ware sherd	--
030553	Isolate	1 buff ware sherd	--
030556	Isolate	1 buff ware sherd	--
030561	Isolate	1 buff ware sherd	--
030562	Isolate	1 buff ware sherd	--
030565	Isolate	Soda bottle, 1915-1930, Owens Glass Works	--
030926	Isolate	1 brown ware rim sherd	--

\* FAR = fire-affected rock

\*\* MV = metavolcanic

collection (three buff ware body sherds) and excavation of one STP, which was sterile. Actual site dimensions were found to be 7 m northwest-southeast by 2 m northeast-

southwest. Figure 6 is the site map for CA-SDI-19,412. The artifact catalog is included in Appendix A.

**Figure 6 includes sensitive material –  
included in Confidential Appendix C**

Figure 6 CA-SDI-19,412 Sketch Map

### **CA-SDI-19,413**

CA-SDI-19,413 was recorded during the survey as a light density pottery scatter and one basalt flake, spread over a 20 m by 10 m area. The pottery scatter was noted as one buff ware sherd and two brown ware sherds. CA-SDI-19,413 is located east of CA-SDI-19,412, in the southeastern corner of Parcel B.

The testing program at CA-SDI-19,413 consisted of surface collection and excavation of two STPs. Five artifacts were collected from the surface: two Tizon Brown Ware sherds and three pieces of angular debris (one basalt and two obsidian). Both STPs were sterile. The site size was measured at 10 m by 10 m. Figure 7 illustrates the locations of surface artifacts and STPs. The artifact catalog is included in Appendix A.

**Figure 7 includes sensitive material –  
included in Confidential Appendix C**

Figure 7 CA-SDI-19,413 Sketch Map

### **CA-SDI-19,415**

CA-SDI-19,415 consists of a scatter of pottery covering 35 m by 30 m, in the south-central portion of Parcel B. Ten buff ware sherds and two brown ware sherds were noted. The site will be placed in a dedicated open space easement.

### **CA-SDI-19,423**

CA-SDI-19,423 is a light density scatter of pottery consisting of three buff ware sherds over a 10 m by 10 m area. The site is a short distance northeast of P-37-030553, in the south-central portion of Parcel A. The site will be placed in a dedicated open space easement.

**CA-SDI-19,424**

CA-SDI-19,424 is a scatter of pottery, ground stone artifacts, and flaked stone covering a 40 m by 30 m area, in the central portion of Parcel A. Over 50 pottery sherds were observed (buff ware and brown ware), including rim and body sherds. Three metate fragments were found, as well as one mano. At least 10 flakes and debitage were noted, including quartz, chert, and metavolcanic materials. The site will be placed in a dedicated open space easement.

**CA-SDI-19,425**

CA-SDI-19,425 is a scatter of pottery and fire-affected rock, with two pieces of burned bone. At least 20 pieces of fire-affected rock were noted, with over 10 buff ware sherds. This site, which measures approximately 10 m by 10 m, is located between CA-SDI-19,424 to the south and CA-SDI-19,426 to the northwest. The two fragments of burned bone were noted during the survey as non-diagnostic. These two pieces were collected during a field visit with a County archaeologist in August 2009. The bone was examined by physical anthropologist, Dr. Arion Mayes, who determined that the two pieces were not human. The site will be placed in a dedicated open space easement.

**CA-SDI-19,426**

CA-SDI-19,426 is a sparse and scattered collection of pottery, debitage, and fire-affected rock in the central portion of Parcel A. At least 10 pieces of fire-affected rock and at least 5 buff ware sherds were found over a 60 m by 60 m area. One obsidian flake and one possible piece of angular debris were also noted at the site. A buff ware sherd initially recorded as an isolate (BS 22) was later determined to be part of the scattered site CA-SDI-19,426. The site will be placed in a dedicated open space easement.

**CA-SDI-19,427**

CA-SDI-19,427 is a pottery and lithic scatter with two pieces of animal bone. Over 25 buff ware sherds were noted. A mano, a chert early stage preform, and over 30 flakes and debitage were also found. Flakes and debitage included chert (including "wonderstone"), quartz, and metavolcanic. Two burned large mammal bones were also noted at the site, which covers 60 m by 30 m in the north-central portion of Parcel A. The site will be placed in a dedicated open space easement.

**CA-SDI-19,428**

CA-SDI-19,428 is a very large lithic scatter with a small amount of unburned animal bone in the western portion of Parcel A. At least 30 flakes and debitage were found, including chert, metavolcanic, and quartzite. One jasper microflake was observed, as well as six mano fragments. Four pieces of unburned large mammal bone were noted. No pottery was found at this site, which covers 220 m by 60 m. The site will be placed in a dedicated open space easement.

### CA-SDI-19,429

CA-SDI-19,429, located near the northwest corner of Parcel A, was originally described as a small pottery scatter. During the survey, five buff ware sherds were noted in a 5 m by 5 m area. During the testing program, additional cultural material was noted, including fire-affected rock, flaked lithic artifacts, ground stone artifacts, and burned animal bone. Site dimensions were increased to 22 m north-south by 15 east-west as a result of the testing program (Figure 8). The site is located in a depression in the dunes. Artifact recovery is summarized in Table 3. The artifact catalog is included in Appendix A.

**Figure 8 includes sensitive material –  
included in Confidential Appendix C**

Figure 8 CA-SDI-19,429 Sketch Map

**Table 3 CA-SDI-19,429, Summary of Artifact Recovery**

Artifact Class	Item	Count	% Count	Weight (g)	% Weight
Flaked stone	Debitage	1	2.0%	0.1	0.0%
Ground stone	Mano	1	2.0%	72.1	10.9%
Ground stone	Metate	2	4.1%	406.3	61.4%
Other stone	Hammerstone	1	2.0%	146.6	22.2%
Native American Ceramics	Body sherd	44	89.8%	36.2	5.5%
<b>Total artifacts</b>		<b>49</b>	<b>100.0%</b>	<b>661.3</b>	<b>100.0%</b>
Bone, non-human	Bulk, unmodified	8	100.0%	14.5	100.0%
<b>Total faunal</b>		<b>8</b>	<b>100.0%</b>	<b>14.5</b>	<b>100.0%</b>

As summarized in Table 3, 49 artifacts and 14.5 g of animal bone were collected during the testing at CA-SDI-19,429. While artifact recovery was good at this site, very little material was found subsurface; with the exception of one fragment of animal bone, all subsurface material was found in the upper 10 cm. Five pottery sherds were recovered in the 0-10 cm level of STP 1; the remaining levels of that STP were sterile. Two sherds came from the 0-10 cm level of STP 2, and 1 piece of animal bone (0.3 g) was found in the 20-30 cm level of that STP. The remaining levels of STP 2 yielded no cultural material. STP 3 was sterile in its entirety.

Almost 90 percent of the artifacts recovered at CA-SDI-19,429 are pottery sherds. Twenty-nine of the 44 pottery sherds are brown ware (apparently Tizon Brown Ware). The remaining 15 sherds are buff ware. Two granitic metate fragments and a quartz mano were collected from the site. One spherical hammerstone was found; it is of medium- to coarse-grained metavolcanic material. A single piece of quartzdebitage was recovered. The pottery and ground stone artifacts suggest that this site represents a camp or at least a

resource processing location. The small amount of subsurface material suggests a limited research potential for the site.

**CA-SDI-19,430**

CA-SDI-19,430 is a dense concentration of artifacts and a hearth, covering a 70 m by 40 m area in the northern portion of Parcel A. Over 200 buff ware sherds were noted, including rim and body sherds. Over 100 pieces of chert debitage and at least 3 quartz debitage were found, as well as 2 metate fragments, 2 mano fragments, 1 unidentified ground stone fragment, and a large amount of unburned large mammal bone. A hearth was also found at the site. The site is in a dedicated open space easement.

**P-37-030542**

P-37-030542 is an isolated brown ware sherd located north of CA-SDI-19,412, in Parcel B.

**P-37-030544**

P-37-030544 is an isolated buff ware sherd near the eastern border of Parcel B.

**P-37-030553**

P-37-030553 is an isolated buff ware sherd located in the southernmost portion of Parcel A.

**P-37-030556**

P-37-030556 is an isolated buff ware sherd found in the western portion of Parcel A.

**P-37-030561**

P-37-030561 is an isolated buff ware sherd found north of CA-SDI-19,427.

**P-37-030562**

P-37-030562 is an isolated buff ware sherd located in the north portion of Parcel A, northeast of P-37-030561.

**P-37-030565**

P-37-030565 is a historic isolate along the northern project boundary. It is a soda bottle made by Owens Glass Works and dates from 1915 to 1930. Due to its Twentieth Century date, this isolate is not associated with potential historic trails in the area, such as the Anza Trail.

**P-37-030926**

P-37-030926 is an isolated brown ware rim sherd located in the Northern Transmission Corridor (the 20-ft SDG&E easement), a short distance west of the northwest corner of Parcel A.

### **3.2.2 Native American Participation/Consultation**

The initial correspondence from the Native American Heritage Commission indicated that there are no cultural resources listed in their Sacred Lands File within the project area and immediate vicinity (see Confidential Appendix B). When the access corridor was added, a new Sacred Lands File Check was requested. In response to this request, the Native American Heritage Commission indicated that significant cultural resources are known within ½ mile of the project area and transmission/access corridors.

Letters regarding the project were sent to individuals and groups identified by the Native American Heritage Commission. Carmen Lucas of the Kwaaymii Laguna Band of Mission Indians responded with concerns regarding the potential for significant cultural resources within the project area. Ms. Lucas expressed particular concern for the burned bone that was called “non-diagnostic” before it was examined by Dr. Arion Mayes. Cremations are often found in the desert areas of the County, and the potential for impacts to sites with cremated remains or associated grave goods is of concern. Ms. Lucas also indicated concern for the pottery scatters, as cremated remains may have been spread by wind, and bone may no longer be present even if pottery sherds are remnants of ollas that once held cremations.

## **4.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION**

### **4.1 Resource Importance**

#### **4.1.1 Resource Importance -- Archaeological and Native American Resources**

Thirteen archaeological sites and eight isolates have been identified within the project area, including the parcels and the transmission/access corridors. Two of these sites (CA-SDI-2365 and CA-SDI-2366) were previously recorded along the Southern Transmission Corridor. CA-SDI-2366 was also recorded within the current substation expansion area. These two sites were not relocated during the March 8, 2010 survey. The site boundary of CA-SDI-2366 has been revised into 13 discrete loci (rather than one large site), which are not located in close proximity to the Area of Potential Effect (APE). The County's Guidelines for Determining Significance indicate that any site that yields information or has the potential to yield information is considered a significant site. The isolates are not considered important resources and are not significant resources under CEQA; their research potential has been fulfilled through their documentation.

Three sites (CA-SDI-19,412, CA-SDI-19,413, and CA-SDI-19,429) were tested to assess site significance and project impacts. As addressed under Results, a relatively small amount of cultural material was found at these sites. The three sites produced little cultural material in a subsurface context. The impacts to the three sites have been reduced to a level of less than significant through recordation, testing, archival research, grading monitoring, and curation of artifacts.

Due to their research potential, the remaining ten archaeological sites are significant resources under County guidelines, but the sites have not been assessed to evaluate their level of importance and whether they meet the significance criteria of CEQA or RPO. Per County Guidelines, the sites are assumed to be significant resources, and direct impacts to the sites have been avoided through project design; the eight sites within the project parcels have been placed in dedicated open space areas (Figure 9). CA-SDI-2365 is recorded in the Southern Transmission Corridor. No ground disturbance is proposed in this area since crossbars would only be added to existing poles. As such there will not be any project impacts to CA-SDI-2365 if there were remnants of it under the surface (not visible during the survey). Although the overall site boundary of CA-SDI-2366 originally was mapped as extending into the substation expansion and the Southern Transmission Corridor, no loci of this site are recorded in proximity to either of these areas, and no cultural material was found in the substation expansion or the transmission corridor during the current survey nor during the 2007 survey for the Sunrise Powerlink.



## 4.2 Impact identification

### 4.2.1 Impact Identification -- Archaeological and Native American Resources

As shown in Figure 9 and summarized in Table 4, three sites (CA-SDI-19,412, CA-SDI-19,413, and CA-SDI-19,429) and six isolates (P-37-030542, P-37-030544, P-37-030553, P-37-030556, P-37-030561, and P-37-030565) would be subject to direct impacts from project implementation. Isolate P-37-030926 was collected during the survey. P-37-030561 is in an open space easement; neither isolate would be subject to direct impacts. As addressed above, a limited amount of cultural material was found at the three sites tested, and their research potential has been fulfilled through recordation of the sites at SCIC and documentation in this report. Therefore, impacts to the sites would not constitute significant effects under CEQA, RPO, or County Guidelines. There would be no direct impacts to the eight sites in dedicated open space easements. There would be no direct impacts to the two sites recorded along the Southern Transmission Corridor (CA-SDI-2365 and CA-SDI-2366). One of these sites (CA-SDI-2366) was originally mapped as extending into the substation expansion, but a 2007 survey conducted for the Sunrise Powerlink project did not identify cultural material within the substation expansion (see 2007 site record update), and no evidence of the site was found there during the March 8, 2010 survey. Therefore, expansion of the substation would have no direct impacts to CA-SDI-2366.

Indirect impacts to the sites within open space easements are not anticipated. The boundaries of the open space easements will be temporarily fenced during construction to ensure that workers and equipment do not inadvertently encroach into the archaeological sites. Once the facility is operating, workers will not be present on a full-time regular basis, so the potential for workers accessing the archaeological sites is slight. Permanent signage indicating environmentally sensitive areas would be used to discourage encroachment into the open space areas during operation and maintenance of the facilities. It was determined that permanent fencing would not be necessary (based on discussions with County staff archaeologists). Hikers and others who may access the property in its current condition would not be expected to do so once the solar facility is operating. Indirect impacts to CA-SDI-2365 and CA-SDI-2366 are not anticipated from the proposed project.

**Figure 9 includes sensitive material –  
included in Confidential Appendix C**

**Figure 9 Locations of Cultural Resources in Relation to Project Plans**

**Table 4 Project Impacts**

CA-SDI- #	Description	Direct Impacts
2365	FAR and lithic scatter. Not found within transmission corridor during current survey	No
2366	Originally recorded as 20 discrete camps with flaked stone, ground stone, pottery, FAR, burned and unburned bone. Update recorded 13 loci, none within transmission corridor or substation expansion. Human remains were also identified at the site during a review of the collection in conjunction with NAGPRA. No evidence of the site was found during the March 8, 2010 survey of the Southern Transmission Corridor and substation expansion area.	No
19,412	Pottery scatter (light density)	Yes
19,413	Pottery scatter (light density) and isolated flake	Yes
19,415	Pottery scatter	No
19,423	Pottery scatter (light density)	No
19,424	Pottery scatter, ground stone, flaked stone	No
19,425	Pottery scatter with FAR* and burned bone	No
19,426	Sparse and scattered collection of pottery, FAR*, debitage	No
19,427	Pottery and lithic scatter with animal bone	No
19,428	Large lithic scatter with unburned bone	No
19,429	Pottery scatter (light density)	Yes
19,430	Hearth and dense artifact concentration: pottery, lithics, unburned bone	No

P-37-#	Description	
030542	Isolate	Yes
030544	Isolate	Yes
030553	Isolate	Yes
030556	Isolate	Yes
030561	Isolate	No
030562	Isolate	Yes
030565	Isolate	Yes
030926	Isolate	No – collected during survey



## **5.0 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS**

Thirteen archaeological sites and eight isolates have been identified within the Borrego Solar Farm project area, including the parcels, Northern and Southern transmission corridors, expanded substation area, and the access corridor. The eight isolates have fulfilled their research potential through their documentation at SCIC and in this report. Three of the archaeological sites were tested to assess site significance and project impacts. These three archaeological sites have limited research potential, which has been mitigated through the recordation, testing program and documentation of the sites at SCIC and in this report, as well as curation of the cultural material at a County approved facility. The three sites tested (CA-SDI-19,412, CA-SDI-19,413, and CA-SDI-19,429) are not significant resources under CEQA or RPO.

The remaining 10 sites have not been tested to assess their level of significance and whether they meet the significance criteria of CEQA or RPO. Per County Guidelines, these 10 sites are assumed to be significant cultural resources under both CEQA and RPO, and the project has been designed to avoid direct impacts to these resources; the eight sites within the project parcels will be left in dedicated open space easements. No development or ground disturbance would be permitted in these areas. The two sites recorded within the Southern Transmission Corridor are mapped in areas where no ground disturbance is proposed; they will not be subject to impacts. No evidence of CA-SDI-2366 has been found within the substation expansion area based on the March 8, 2010 survey. During construction activities, temporary fencing would be placed on the perimeter of the open space areas to ensure that workers and equipment do not inadvertently encroach into the archaeological sites. Permanent signage indicating environmentally sensitive areas would be used to discourage encroachment into the open space areas during operation and maintenance of the facilities. Permanent fencing is not necessary (as discussed with County staff archaeologists). These mitigation measures and design considerations would help limit impacts to the archaeological resources within the project area. Mitigation measures are summarized in the table in Section 8.0.

Due to the dune topography within the project area, there is a potential for subsurface cultural resources that are not evident on the surface. Therefore, a monitoring program must be implemented for any grading or other ground-disturbing activity under the MUP.

Prior to approval of grading or improvement plans, the applicant shall:

Implement a grading monitoring and data recovery program to mitigate potential impacts to undiscovered buried archaeological resources on the Borrego Solar Farm project (MUP 09-012 and 09-014) to the satisfaction of the Director of Planning and Land Use. This program shall include, but shall not be limited to, the following actions:

- a. Provide evidence to the Department of Planning and Land Use that a County certified archaeologist has been contracted to implement a grading monitoring and data recovery program to the satisfaction of the Director of Planning and Land Use (DPLU). A letter from the Principal Investigator shall be submitted to the Director of Planning and Land Use. The letter shall include the following guidelines:
- (1) The project archaeologist shall contract with a Native American monitor to be involved with the grading monitoring program as outlined in the County of San Diego Report Format and Content Guidelines (2007).
  - (2) The County certified archaeologist/historian and Native American monitor shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program as outlined in the County of San Diego Report Format and Content Guidelines (2007).
  - (3) The project archaeologist shall monitor all areas identified for development including off-site improvements.
  - (4) An adequate number of monitors (archaeological/historical/Native American) shall be present to ensure that all earthmoving activities are observed and shall be on-site during all grading activities for areas to be monitored.
  - (5) During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Native American monitor(s) shall be onsite as determined by the Project Archaeologist of the excavations. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist in consultation with the Native American monitor. Monitoring of cutting of previously disturbed deposits will be determined by the Principal Investigator.
  - (6) Isolates and clearly non-significant deposits will be minimally documented in the field and the monitored grading can proceed.
  - (7) In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor(s) shall have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery to allow evaluation of potentially significant cultural resources. The Principal Investigator shall contact the County Archaeologist at the time of the discovery. The Principal Investigator, in consultation with County staff archaeologist, shall determine the significance of the discovered resources. The County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting

archaeologist and approved by the County Archaeologist, then carried out using professional archaeological methods.

- (8) If any human bones are discovered, the Principal Investigator shall contact the County Coroner. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted by the Principal Investigator in order to determine proper treatment and disposition of the remains.
- (9) Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The Principal Investigator shall determine the amount of material to be recovered for an adequate artifact sample for analysis.
- (10) In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading monitoring program shall be processed and curated at a San Diego facility that meets federal standards per 36 CFR Part 79, and therefore would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.
- (11) Monthly status reports shall be submitted to the Director of Planning and Land Use starting from the date of the notice to proceed to termination of implementation of the grading monitoring program. The reports shall briefly summarize all activities during the period and the status of progress on overall plan implementation. Upon completion of the implementation phase, a final report shall be submitted describing the plan compliance procedures and site conditions before and after construction.
- (12) In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifacts and research data within the research context shall be completed and submitted to the satisfaction of the Director of Planning and Land Use prior to the issuance of any building permits. The report will include Department of Parks and Recreation Primary and Archaeological Site forms.
- (13) In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the Director of Planning and Land Use by the

consulting archaeologist that the grading monitoring activities have been completed.

- b. Provide evidence to the Director of Public Works (DPW) that the following notes have been placed on the Grading Plan:
- (1) The County certified archaeologist/historian and Native American monitor shall attend the pre-construction meeting with the contractors to explain and coordinate the requirements of the monitoring program.
  - (2) The project archaeologist shall monitor all areas identified for development including off-site improvements.
  - (3) During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Native American monitor(s) shall be onsite as determined by the Principal Investigator of the excavations. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist in consultation with the Native American monitor. Monitoring of cutting of previously disturbed deposits will be determined by the Principal Investigator.
  - (4) In the event that previously unidentified potentially significant cultural resources are discovered, the archaeological monitor(s) shall have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery to allow evaluation of potentially significant cultural resources. The Principal Investigator shall contact the County Archaeologist at the time of the discovery. The Principal Investigator, in consultation with County staff archaeologist, shall determine the significance of the discovered resources. The County Archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the Principal Investigator and approved by the County Archaeologist, then carried out using professional archaeological methods.
  - (5) The archaeological monitor(s) and Native American monitor shall monitor all areas identified for development.
  - (6) If any human bones are discovered, the Principal Investigator shall contact the County Coroner. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the Native American Heritage Commission, shall be contacted by the Principal Investigator order to determine proper treatment and disposition of the remains.

- (7) The Principal Investigator shall submit monthly status reports to the Director of Planning and Land Use starting from the date of the notice to proceed to termination of implementation of the grading monitoring program. The reports shall briefly summarize all activities during the period and the status of progress on overall plan implementation. Upon completion of the implementation phase, a final report shall be submitted describing the plan compliance procedures and site conditions before and after construction.
- (8) Prior to rough grading inspection sign-off, provide evidence that the field grading monitoring activities have been completed to the satisfaction of the Director of Planning and Land Use. Evidence shall be in the form of a letter from the Project Investigator.
- (9) Prior to Final Grading Release, submit to the satisfaction of the Director of Planning and Land Use, a final report that documents the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program. The report shall also include the following:
- Department of Parks and Recreation Primary and Archaeological Site forms.
  - Evidence that all cultural material collected during the grading monitoring program has been curated at a San Diego facility that meets federal standards per 36 CFR Part 79, and therefore would be professionally curated and made available to other archaeologists/ researchers for further study. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility identifying that archaeological materials have been received and that all fees have been paid.

Or

In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the Director of Planning and Land Use by the Principal Investigator that the grading monitoring activities have been completed.





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Bobby L. Barrett	Viejas Band of Mission Indians
Bonnie Bruce	California State Parks, Colorado Desert District
David Caterino	South Coastal Information Center
Ron Christman	Kumeyaay Cultural Historic Committee
Paul Cuero	Kumeyaay Cultural Heritage Preservation
Nick Doose	South Coastal Information Center
Leroy J. Elliott	Manzanita Band of Kumeyaay Nation
Michael Garcia	Ewiiapaayp Tribal Office
Johnny Hernandez	Santa Ysabel Band of Diegueño Indians
Fidel Hyde	Campo Kumeyaay Nation
Rodney Kephart	Santa Ysabel Band of Diegueño Indians
Monique LaChappa, Chairperson	Campo Kumeyaay Nation

Allen E. Lawson	San Pasqual Band of Mission Indians
Clint Linton	Red Tail Monitoring and Research
Carmen Lucas	Kwaaymii Laguna Band of Mission Indians
Arion Mayes	San Diego State University, Anthropology Department
Rebecca Osuna	Inaja Band of Mission Indians
Gwendolyn Parada	La Posta Band of Mission Indians
Edwin Romero	Barona Group of the Capitan Grande
Mark Romero	Mesa Grande Band of Mission Indians
Dave Singleton	Native American Heritage Commission
Danny Tucker	Sycuan Band of the Kumeyaay Nation
Sue Wade	California State Parks, Colorado Desert District

## 8.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

As addressed in Section 5.0, the following mitigation measures and design considerations will serve to mitigate project impacts to below a level of significance.

**Table 4 Mitigation Measures and Design Considerations**

CA-SDI- #	Direct Impacts	Mitigation Measures
2365	No	Monitoring of project grading; curation of any cultural material collected during monitoring
2366	No	Monitoring of project grading; curation of any cultural material collected during monitoring
19,412	Yes	Monitoring of project grading; curation of any cultural material collected during testing and monitoring
19,413	Yes	Monitoring of project grading; curation of any cultural material collected during testing and monitoring
19,415	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,423	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,424	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,425	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,426	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring



CA-SDI- #	Direct Impacts	Mitigation Measures
19,427	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,428	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring
19,429	Yes	Monitoring of project grading; curation of any cultural material collected during testing and monitoring
19,430	No	Avoidance/placement in dedicated open space easement; temporary fencing during construction; permanent signage denoting environmentally sensitive area; monitoring of project grading; curation of any cultural material collected during monitoring

**APPENDIX A**  
**ARTIFACT CATALOGS**



**JN 2345 CA-SDI-19,412 Summary Table**

Artifact #	Unit Type	Unit #	Upper Depth	Lower Depth	Class	Item	Material	Count	Weight (g)
1	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	11.1
2	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	16.3
3	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	27.6

**JN 2345 CA-SDI-19,413 Summary Table**

Artifact #	Unit Type	Unit #	Upper Depth	Lower Depth	Class	Item	Material	Count	Weight (g)
1	Mapped point	0	0	0	Native American ceramics	Rim sherd	Tizon Brown Ware	1	7.2
2	Mapped point	0	0	0	Flaked stone	Debitage	Medium to coarse grained metavolcanic	1	3.3
3	Mapped point	0	0	0	Flaked stone	Debitage	Obsidian	1	1.8
4	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	1	4.4
5	Mapped point	0	0	0	Flaked stone	Debitage	Obsidian	1	1.3

**JN 2345 CA-SDI-19,429 Summary Table**

Artifact #	Unit Type	Unit #	Upper Depth	Lower Depth	Class	Item	Material	Count	Weight (g)
1	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	1	1.5
2	Mapped point	0	0	0	Bone, nonhuman	Bulk unmodified	Unclassified Bone	3	13.3
3	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	2	0.2
4	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	1.2
5	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	0.5
6	Mapped point	0	0	0	Bone, nonhuman	Bulk unmodified	Unclassified Bone	1	0.2
7	Mapped point	0	0	0	Bone, nonhuman	Bulk unmodified	Unclassified Bone	3	0.7
8	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	5	2.3
9	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	2	0.3
10	Mapped point	0	0	0	Groundstone	Metate	Granitic	1	170.8
11	Mapped point	0	0	0	Flaked stone	Debitage	Quartz	1	0.1
12	Mapped point	0	0	0	Groundstone	Metate	Granitic	1	235.5
13	Mapped point	0	0	0	Groundstone	Mano	Quartz	1	72.1
14	Mapped point	0	0	0	Other stone	Hammerstone, spherical	Medium to coarse grained metavolcanic	1	146.6
15	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	1	10.2
16	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	2	5
17	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	1	1
18	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	1	1.5
19	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	9	2.9
20	Mapped point	0	0	0	Native American ceramics	Body sherd	Buff Ware	3	0.3
21	Mapped point	0	0	0	Native American ceramics	Body sherd	Tizon Brown Ware	8	0.3
22	Shovel test pit	1	0	10	Native American ceramics	Body sherd	Tizon Brown Ware	5	8.6
23	Shovel test pit	2	0	10	Native American ceramics	Body sherd	Tizon Brown Ware	2	0.4
24	Shovel test pit	2	20	30	Bone, nonhuman	Bulk unmodified	Unclassified Bone	1	0.3